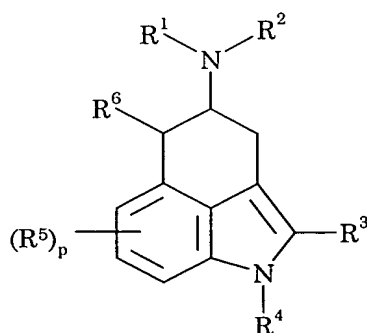
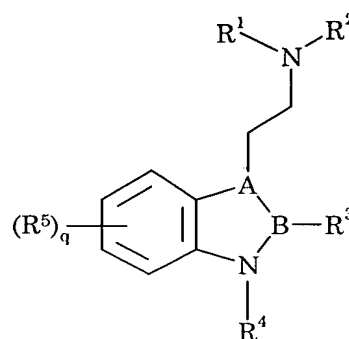
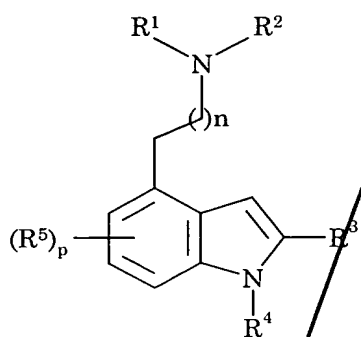


## WHAT IS CLAIMED IS:

1. A method for the treatment and/or prevention of a clinical condition for which selective agonism or antagonism of 5-HT<sub>6</sub> receptors is indicated comprising administering to a patient in need of such treatment an effective amount of a compound, or a pharmaceutically acceptable salt or prodrug thereof, having a structure in accordance with Formula I, II or III:



wherein

n is 1 or 2;

p is 0, 1, 2 or 3;

q is 0, 1, 2, 3 or 4;

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5 (a) compounds of Formula I in which p is zero; R<sup>1</sup> and R<sup>2</sup> are identical and represent hydrogen or methyl; R<sup>3</sup> represents hydrogen or benzoyl; and R<sup>4</sup> represents arylsulphonyl or dimethylaminosulphonyl;

10 (b) compounds of Formula II in which R<sup>1</sup> and R<sup>2</sup> are identical and represent hydrogen or methyl, or together complete a pyrrolidinyl, piperidinyl, piperazinyl or 4-methylpiperazinyl ring; R<sup>3</sup> represents hydrogen or methyl; R<sup>4</sup> represents arylsulphonyl, thienylsulphonyl, benzoyl or *tert*-butoxycarbonyl; R<sup>5</sup> represents hydroxy, methoxy, benzyloxy or nitrile; and q is zero or 1; and

15 (c) compounds of Formula III in which R<sup>1</sup> and R<sup>2</sup> are identical and represent hydrogen or methyl; R<sup>3</sup> represents hydrogen; R<sup>4</sup> represents arylsulphonyl; R<sup>6</sup> represents hydroxy or methoxy; and p is zero.

20 4. The method according to claim 1 in which the compound is selected from:

2-[1-(benzenesulphonyl)-1*H*-indol-4-yl]ethylamine;

*N,N*-dimethyl 2-[1-(benzenesulphonyl)-1*H*-indol-4-yl]ethylamine;

*N,N*-dimethyl 2-[1-(dimethylamino)sulphonyl-1*H*-indol-4-yl]ethylamine;

25 *N,N*-dimethyl 3-[1-(benzenesulphonyl)-1*H*-indol-4-yl]propylamine;

*N,N*-dimethyl 2-[1-(benzenesulphonyl)-2-benzoyl-1*H*-indol-4-yl]ethylamine;

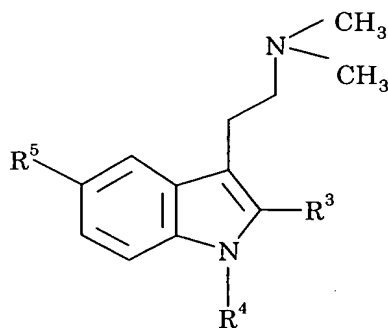
*trans*-4-dimethylamino-1-(4-methylbenzenesulphonyl)-1,3,4,5-tetrahydro-benz[*cd*]indol-5-ol; and

30 4-dimethylamino-5-methoxy-1-(4-methylbenzenesulphonyl)-1,3,4,5-tetrahydro-benz[*cd*]indole;

or pharmaceutically acceptable salts or prodrugs thereof.

5. The method of claim 1 in which the compound is in accordance with Formula II(a):

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(II(a))

where R<sup>3</sup>, R<sup>4</sup> and R<sup>5</sup> are as defined in claim 1.

- 5            6.        The method of claim 5 in which said compound is selected from:
- N,N*-dimethyl 2-[1-(benzenesulphonyl)-5-methoxy-1*H*-indol-3-yl]ethylamine;
- N,N*-dimethyl 2-[5-methoxy-1-(4-methylbenzenesulphonyl)-1*H*-indol-3-yl]ethylamine;
- 10           *N,N*-dimethyl 2-[1-(4-chlorobenzenesulphonyl)-5-methoxy-1*H*-indol-3-yl]ethylamine;
- N,N*-dimethyl 2-[1-(3-chlorobenzenesulphonyl)-5-methoxy-1*H*-indol-3-yl]ethylamine;
- 15           *N,N*-dimethyl 2-[5-methoxy-1-(2-naphthalenesulphonyl)-1*H*-indol-3-yl]ethylamine;
- N,N*-dimethyl 2-[5-methoxy-1-(4-methoxybenzenesulphonyl)-1*H*-indol-3-yl]ethylamine;
- N,N*-dimethyl 2-[1-(2-chlorobenzenesulphonyl)-5-methoxy-1*H*-indol-3-yl]ethylamine;
- 20           *N,N*-dimethyl 2-(1-benzoyl-5-methoxy-1*H*-indol-3-yl)ethylamine;
- N,N*-dimethyl 2-[5-methoxy-1-(2-thiophenesulphonyl)-1*H*-indol-3-yl]ethylamine;

*N,N*-dimethyl 2-(1-benzenesulphonyl-5-methoxy-2-methyl-1*H*-indol-3-yl)ethylamine;

*N,N*-dimethyl 2-(1-benzenesulphonyl-1*H*-indol-3-yl)ethylamine;

*N,N*-dimethyl 2-(1-methylsulphonyl-1*H*-indol-3-yl)ethylamine;

- 5 *N,N*-dimethyl 2-(5-methoxy-1-methylsulphonyl-1*H*-indol-3-yl)ethylamine;  
[3-(2-dimethylamino-ethyl)-5-hydroxy-1*H*-indol-1-yl]phenylmethanone;  
3-(2-dimethylamino-ethyl)-5-hydroxy-1*H*-indole-1-carboxylic acid *tert*-butyl ester;

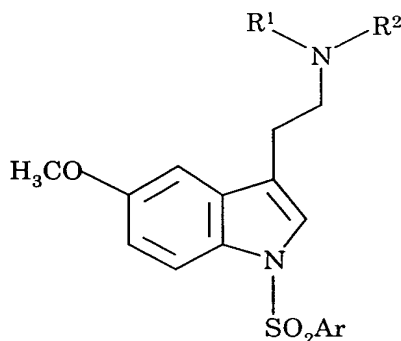
- 10 *N,N*-dimethyl 2-(1-benzenesulphonyl-5-benzyloxy-1*H*-indol-3-yl)ethylamine;

*N,N*-dimethyl 2-(1-benzenesulphonyl-5-hydroxy-1*H*-indol-3-yl)ethylamine;  
and

*N,N*-dimethyl 2-(1-benzenesulphonyl-5-cyano-1*H*-indol-3-yl)ethylamine;  
and pharmaceutically acceptable salts or prodrugs thereof.

15

7. The method of claim 1 in which the compound is in accordance with Formula II(b):



(II(b))

20

where R<sup>1</sup> and R<sup>2</sup> are as defined in claim 1, and Ar represents an aryl group.

8. The method of claim 7 in which said compound is selected from:

2-[1-(benzenesulphonyl)-5-methoxy-1*H*-indol-3-yl]ethylamine;

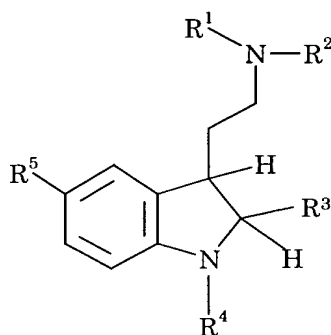
1-benzenesulphonyl-5-methoxy-3-[(2-pyrrolidin-1-yl)ethyl]-1*H*-indole;

5 1-benzenesulphonyl-5-methoxy-3-[(2-piperidin-1-yl)ethyl]-1*H*-indole; and

1-benzenesulphonyl-5-methoxy-3-[(2-piperazin-1-yl)ethyl]-1*H*-indole

and pharmaceutically acceptable salts or prodrugs thereof.

9. The method of claim 1 in which the compound is in  
10 accordance with Formula II(c):



(II(c))

where R<sup>1</sup> - R<sup>5</sup> are as defined in claim 1.

10. The method of claim 9 in which said compound is:  
15 *N,N*-dimethyl 2-(1-benzenesulphonyl-5-methoxy-2,3-dihydro-1*H*-indol-3-yl)ethylamine;

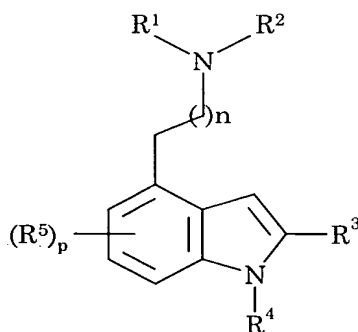
or a pharmaceutically acceptable salt or prodrug thereof.

11. The method of claim 1 in which the compound has a 5-HT<sub>6</sub>  
20 receptor (rat or human) binding affinity (K<sub>i</sub>), when measured in cell lines expressing cloned recombinant 5-HT<sub>6</sub> receptors, of less than 1 μM, and has a selective affinity for 5-HT<sub>6</sub> receptors relative to 5-HT<sub>5</sub> and/or 5-HT<sub>7</sub> receptors of at least 3-fold.

12. The method of claim 1 in which the clinical condition is selected from the group consisting of:

Parkinson's disease, Huntington's disease, anxiety, depression, manic depression, psychosis, epilepsy, obsessive compulsive disorders, migraine, Alzheimers disease, sleep disorders, feeding disorders including anorexia and bulimia, panic attacks, withdrawal from drug abuse including abuse of cocaine, ethanol, nicotine and benzodiazepines, schizophrenia, disorders associated with spinal trauma and/or head injury hydrocephalus, and GI (gastrointestinal) disorders including IBS (Irritable Bowel Syndrome).

13. A compound of Formula I:



(I)

15 wherein

$n$  is 1 or 2;

$p$  is 0, 1, 2 or 3;

$R^1$  and  $R^2$  independently represent hydrogen,  $C_{1-6}$  alkyl or aryl ( $C_{1-6}$ )alkyl, or together represent the atoms necessary to complete a heterocycloalkyl group comprising the nitrogen atom to which  $R^1$  and  $R^2$  are attached;

$R^3$  represents hydrogen,  $C_{1-6}$  alkyl,  $C_{2-6}$  alkenyl,  $C_{2-6}$  alkynyl, aryl( $C_{1-6}$ )alkyl, aryl, heteroaryl, arylcarbonyl, heteroarylcarbonyl or  $C_{1-6}$  alkylcarbonyl;

55

R<sup>4</sup> represents arylsulphonyl, heteroarylsulphonyl, C<sub>1-6</sub> alkylsulphonyl, di(C<sub>1-6</sub>)alkylaminosulphonyl, arylcarbonyl, C<sub>1-6</sub> alkylcarbonyl, heteroarylcarbonyl or C<sub>1-6</sub> alkoxy carbonyl; and  
each R<sup>5</sup> independently represents hydroxy, C<sub>1-6</sub> alkoxy,  
5 aryl(C<sub>1-6</sub>)alkoxy, nitrile or halogen,  
or a pharmaceutically acceptable salt or prodrug thereof.

14. A compound according to claim 13 in which R<sup>1</sup> and R<sup>2</sup> independently represent hydrogen, methyl, ethyl, propyl or benzyl, or R<sup>1</sup> and R<sup>2</sup> in combination represent pyrrolidinyl, piperidinyl, piperazinyl, 4-methylpiperazinyl or morpholinyl;

R<sup>3</sup> represents hydrogen, methyl, ethyl, benzyl, allyl, propargyl, benzoyl, phenyl, thienyl or furoyl;

R<sup>4</sup> represents benzenesulphonyl, naphthalene-2-sulphonyl, o-, m- or p-toluenesulphonyl, o-, m- or p-chlorobenzenesulphonyl, o-, m- or p-methoxybenzenesulphonyl, methanesulphonyl, dimethylaminosulphonyl, thienylsulphonyl, benzoyl, acetyl, furoyl or *tert*-butoxycarbonyl; and

R<sup>5</sup> represents hydroxy, methoxy, ethoxy, propoxy, benzyloxy, nitrile, fluorine, chlorine or bromine.

15. A compound according to claim 13 in which p is zero; R<sup>1</sup> and R<sup>2</sup> are identical and represent hydrogen or methyl; R<sup>3</sup> represents hydrogen or benzoyl; and R<sup>4</sup> represents arylsulphonyl or dimethylaminosulphonyl.

16. A compound according to claim 15 selected from:  
2-[1-(benzenesulphonyl)-1*H*-indol-4-yl]ethylamine;  
*N,N*-dimethyl 2-[1-(benzenesulphonyl)-1*H*-indol-4-yl]ethylamine;  
*N,N*-dimethyl 2-[1-(dimethylamino)sulphonyl-1*H*-indol-4-yl]ethylamine;  
*N,N*-dimethyl 3-[1-(benzenesulphonyl)-1*H*-indol-4-yl]propylamine;  
30 *N,N*-dimethyl 2-[1-(benzenesulphonyl)-2-benzoyl-1*H*-indol-4-yl]ethylamine;

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and pharmaceutically acceptable salts and prodrugs thereof.

17. A compound according to claim 13 for use in therapy.

5 ~~17~~ 18. A pharmaceutical composition comprising a compound  
according to claim 13 in association with a pharmaceutically acceptable  
carrier.

Add  
A'

10

57



R<sup>1</sup> and R<sup>2</sup> independently represent hydrogen, C<sub>1-6</sub> alkyl or aryl (C<sub>1-6</sub>)alkyl, or together represent the atoms necessary to complete a heterocycloalkyl group comprising the nitrogen atom to which R<sup>1</sup> and R<sup>2</sup> are attached;

R<sup>3</sup> represents hydrogen, C<sub>1-6</sub> alkyl, C<sub>2-6</sub> alkenyl, C<sub>2-6</sub> alkynyl, aryl(C<sub>1-6</sub>)alkyl, aryl, heteroaryl, arylcarbonyl, heteroarylcarbonyl or C<sub>1-6</sub> alkylcarbonyl;

R<sup>4</sup> represents arylsulphonyl, heteroarylsulphonyl, C<sub>1-6</sub> alkylsulphonyl, di(C<sub>1-6</sub>)alkylaminosulphonyl, arylcarbonyl, C<sub>1-6</sub> alkylcarbonyl, heteroarylcarbonyl or C<sub>1-6</sub> alkoxycarbonyl;

each R<sup>5</sup> independently represents hydroxy, C<sub>1-6</sub> alkoxy, aryl(C<sub>1-6</sub>)alkoxy, nitrile or halogen;

R<sup>6</sup> represents hydrogen, hydroxy or C<sub>1-6</sub> alkoxy; and

-A-B- represents -C=C- or -CH-CH-.

2. The method of claim 1 in which said compound is in accordance with said Formula I, II or III wherein:

R<sup>1</sup> and R<sup>2</sup> independently represent hydrogen, methyl, ethyl, propyl or benzyl, or R<sup>1</sup> and R<sup>2</sup> in combination represent pyrrolidinyl, piperidinyl, piperazinyl, 4-methylpiperazinyl or morpholinyl;

R<sup>3</sup> represents hydrogen, methyl, ethyl, benzyl, allyl, propargyl, benzoyl, phenyl, thienyl or furoyl;

R<sup>4</sup> represents benzenesulphonyl, naphthalene-2-sulphonyl, o-, m- or p-toluenesulphonyl, o-, m- or p-chlorobenzenesulphonyl, o-, m- or p-methoxybenzenesulphonyl, methanesulphonyl, dimethylaminosulphonyl, thienylsulphonyl, benzoyl, acetyl, furoyl or *tert*-butoxycarbonyl; and

R<sup>5</sup> represents hydroxy, methoxy, ethoxy, propoxy, benzyloxy, nitrile, fluorine, chlorine or bromine.

3. The method of claim 1 or claim 2 in which the compound is selected from: